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248	Class	ISSUE CLASSIFICATION

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5855343



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SERIAL NUMBER 08/814,168	FILING DATE 03/07/97	CLASS 248	SUBCLASS 101	GROUP ART UNIT 3505	EXAMINER Phm

APPLICANTS DAVID E. KREKELBERG, MINNETONKA, MN.
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 VERIFIED
 NONE
 LDP

FOREIGN/PCT APPLICATIONS*
 VERIFIED
 NONE
 LDP

FOREIGN FILING LICENSE GRANTED 10/06/97

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TITLE CAMERA CLIP

U.S. DEPT. OF COMM./PAT. & TM—PTO-436L (Rev.12-94)

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PATENT APPLICATION

APPROVED FOR LICENSE

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CONTENTS

1.	Application	2	papers.	6/25/97
2.	Att received			8/27/97
3.	Title - naming + loc			2/6/98
4.	Re/3 mos			1/18/98 cont'd
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248	121 126 440.1 166 176.1 688 918	12/15/97	LNP
224	908		
396	421 422 423 424 425 426 427 428		
SEARCH	UPDATED 06/30/98		

SEARCH NOTES

	Date	Exmr.
SEARCHED DATE 12/15/98 CLASS 248	12/15/98	LNP
APPLIED FOR SEARCH SEARCHED SEARCHED	06/30/98	
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Class	Sub.	Date	Exmr.
248	121 126 440.1 166 176.1 688 918	07/07/98	LNP
224	908 421 →428		

POSITION	ID NO.	DATE
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VERIFIER	"	"
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		28	
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2	✓	07	
		14	
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3	✓	=	
4	✓	=	
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SYMBOLS

- ✓ Rejected
- = Allowed
- (Through number) Canceled
- + Restricted
- N Non-elected
- I Interference
- A Appeal
- O Objected

Claim	Date
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	248	121	
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08 / 814,168	CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)	
APPLICANT'S NAME (PLEASE PRINT)	248	126	918
DAVID E. KREKELBERG			
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PTO 270 (REV. 5-91)	GROUP ART UNIT 3632	ASSISTANT EXAMINER (PLEASE STAMP OR PRINT FULL NAME) LONG DINH PHAN	
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Krekelberg

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[45] **Date of Patent:** **Jan. 5, 1999**

[54] **CAMERA CLIP**

[75] Inventor: **David E. Krekelberg**, Minnetonka, Minn.

[73] Assignee: **iREZ Research, Corporation**, Minnetonka, Minn.

[21] Appl. No.: **814,168**

[22] Filed: **Mar. 7, 1997**

[51] Int. Cl.⁶ **A47G 29/00**

[52] U.S. Cl. **248/121; 248/126; 248/918**

[58] Field of Search **248/121, 126, 248/440.1, 166, 176.1, 688, 918; 224/908; 396/421, 422, 423, 424, 425, 426, 427,**
428

[56] **References Cited**

U.S. PATENT DOCUMENTS

1,208,344 12/1916 McAll 248/126

Primary Examiner—Ramon O. Ramirez

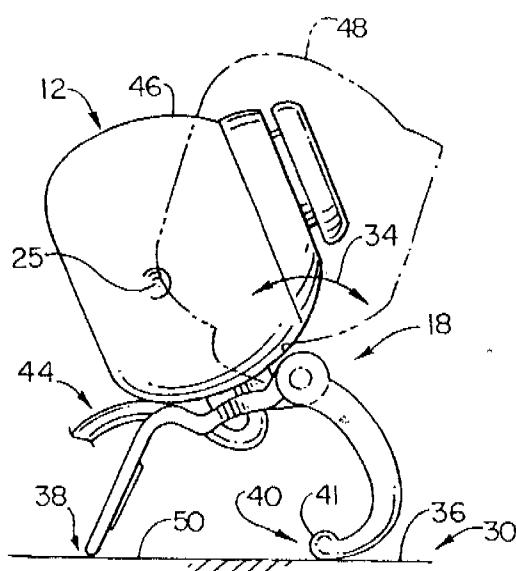
Assistant Examiner—Long Dinh Phan

Attorney, Agent, or Firm—Nawrocki, Rooney & Sivertson, P.A.

[57] **ABSTRACT**

A clip for supporting a portable camera either on a surface or on an edge of a housing, and for protecting the lens of the camera when the camera is not being supported. The clip provides two axis of rotation to position the camera to any desired viewing angle. The clip may be rotated to a first position to support the camera on a surface of a table or desk. The clip may be rotated to a second position to support the camera on the display screen of a laptop computer. When the camera is not being supported in the first position or the second position, the camera may be rotated to be releasably held by the clip to protect the camera and lens during storage.

21 Claims, 2 Drawing Sheets

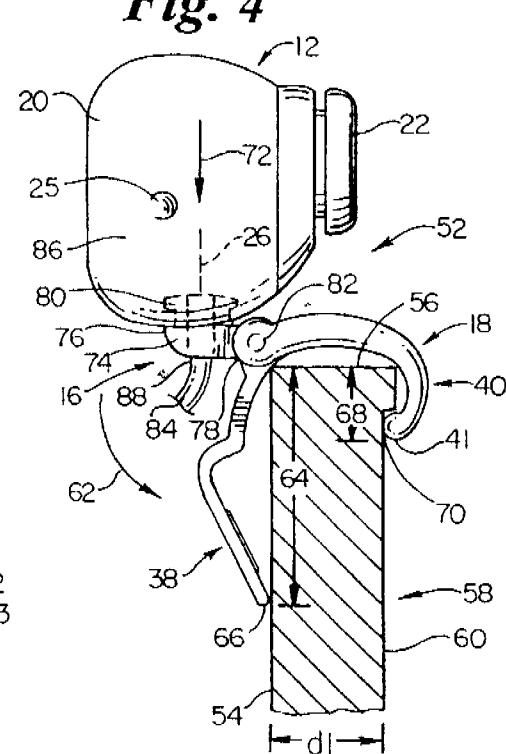
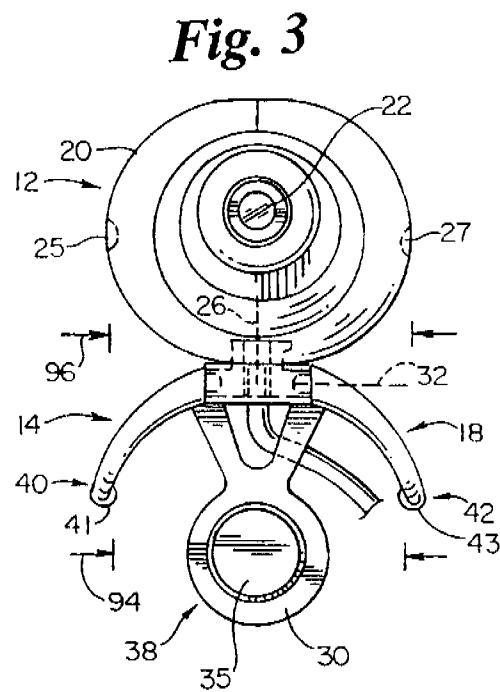
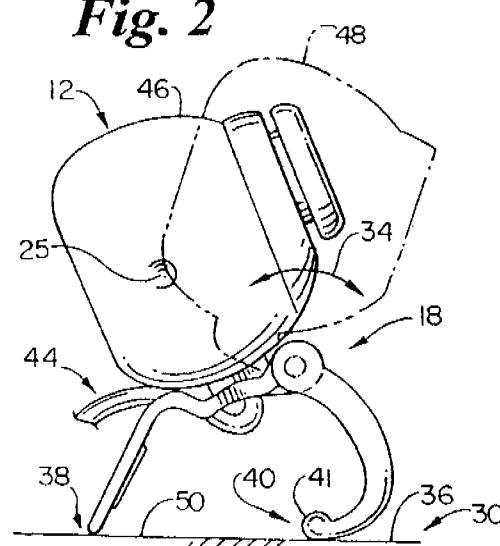
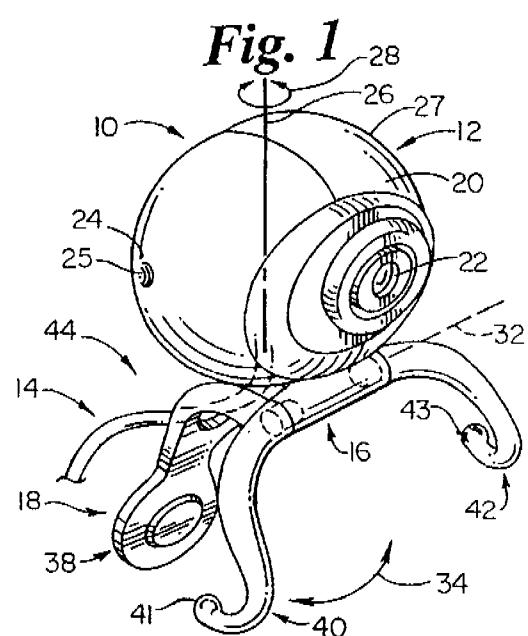


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Fig. 5

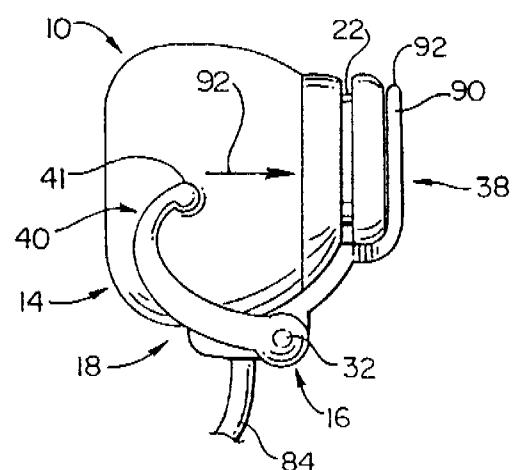


Fig. 6

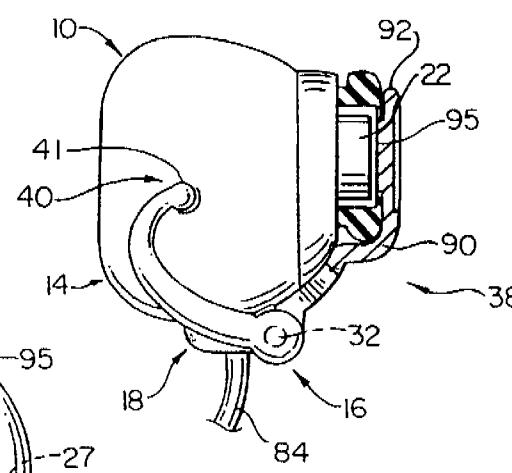
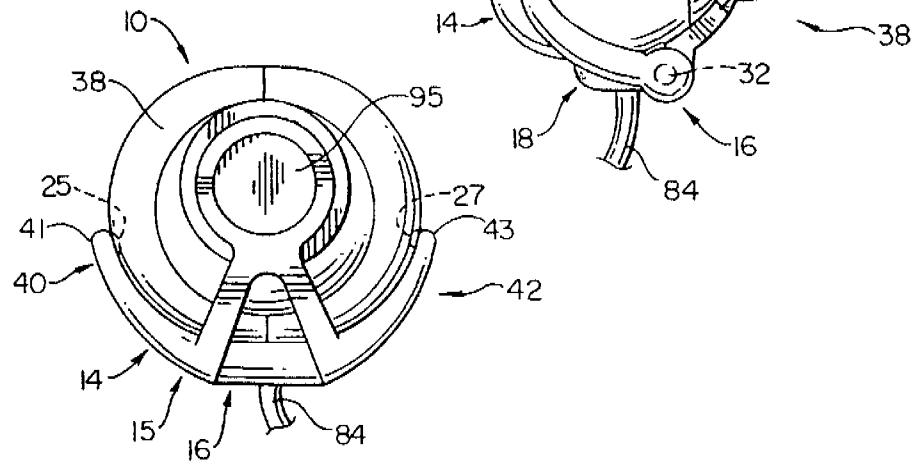


Fig. 7



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1**CAMERA CLIP****FIELD OF THE INVENTION**

This invention relates to a clip for holding a camera. More particularly it relates to a clip for supporting a portable camera either on a surface or on an edge of a housing, and for protecting the lens of the camera when the camera is not being supported.

BACKGROUND OF THE INVENTION

With portable cameras, it is desirable to have an apparatus which can support the camera in any number of desired configurations. The apparatus must easily accommodate repositioning the camera to new orientations during use, and must be easily transportable. This is especially true when using the camera with a portable computer, such as a laptop computer. With increasing improvements in technology, both the laptop computer and camera have become smaller over time, emphasizing the need for a compatible camera support apparatus. The camera support apparatus must be versatile, light in weight, and be easily transportable to accommodate the new camera and laptop designs, and must desirably facilitate easy and safe storage of the camera. Often times portable computers are stored in carry bags which may be fully loaded with other hardware devices, such as disk drives or printers, as well as with personal effects, making for cramped storage conditions. The camera support apparatus must desirably protect the camera from damage during transport under these cramped storage conditions to avoid the necessity for separate storage means in order to maintain camera portability.

In the past, camera support apparatus were not easily transportable. Often times these apparatus utilized designs which incorporated a tripod approach, or which used one or more telescoping arms to support the camera. These designs attempted to support the camera during use, and then collapse to a smaller size to facilitate storage or transportation. While these designs were transportable, often times even the collapsed size of the prior art camera support apparatus could not be easily accommodated by a laptop computer bag. These prior art apparatus also did not provide means to protect the camera during transport, and if constructed of hard, exposed materials, tended to damage the cameras.

Another problem with prior art camera support apparatus was that they could not easily accommodate the variety of applications desired for portable cameras. These applications ranged from supporting the camera on the surface of a desk or table to supporting the camera on the upright display screen of a laptop computer. With the prior art, often times more than one camera support apparatus was necessary in order to support the desired range of applications. This unfortunately adversely impacted portability of the camera.

Thus, a desire was created within the industry for a small, easily transportable camera support apparatus for supporting the camera on both horizontal surfaces, such as the surface of a desk or table, and vertical surfaces, such as the display screen of a laptop computer, and to protect the camera during storage and transport.

SUMMARY OF THE INVENTION

Accordingly, it is an object of the invention to provide a clip for supporting a portable camera either on a surface or on an edge of a housing, and for protecting the lens of the camera when the camera is not being supported. The clip provides two axes of rotation to position the camera to any

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desired viewing angle. The clip may be rotated to a first position to support the camera on a surface of a table or desk. The clip may be rotated to a second position to support the camera on a display screen of a laptop computer. When the camera is not being supported in the first position or the second position, the camera may be rotated to be releasably held by the clip to protect the camera and lens during storage.

In a preferred embodiment of the present invention, an apparatus is provided for supporting a camera on an object where the apparatus comprises a hinge member and a support frame. The hinge member is rotatably attached to the camera where the camera rotates over a first axis of rotation relative to the hinge member. A support frame is hingedly attached to the hinge member to engagingly support the hinge member on the object, where the hinge member rotates over a second axis of rotation relative to the support frame. The first axis of rotation is perpendicular to the second axis of rotation, and the second axis of rotation is substantially parallel to a first surface of the object when the hinge member is engagingly supported on the object. In the preferred embodiment, the support frame further has a rear support element and first and second front support elements. In the preferred embodiment, the rear support element and the first and second front support elements support the camera in the first position on the first surface when the rear support element and the first and second front support elements are engaging the first surface when the first surface is substantially level. In the preferred embodiment, the rear support element and the first and second front support elements engage the first surface at three locations in a plane of the first surface to prevent rotation of the support frame relative to the first surface in any direction within the plane of the first surface. In the preferred embodiment, when the support frame is in the first position, the object may be the top of a table where the first surface is a top surface of the table. The object may also be a desk top where the first surface is a top surface of the desk.

In the preferred embodiment, the rear support element and the first and second front support elements support the camera in a second position on the first surface adjacent an edge when the first surface is inclined from the substantially level position. The object has a second surface wherein a thickness between the first surface and the second surface defines an edge therebetween. The camera is maintained adjacent to the edge in the second position where the uppermost portion of the object is the edge. The rear support element engages a first surface and the first and second support elements engage the edge and the second surface. The rear support element and the first and second front support elements, in combination, maintain the camera adjacent the edge and prevent rotation of the support frame along an axis substantially parallel to the second axis where the second axis is substantially parallel to the edge. In a preferred embodiment, the rear support element and the first and second front support elements support the camera in the second position on the first surface adjacent the edge when a first distance from the edge to the position where the rear support element engages the first surface is greater than a second distance from the edge to the position where the first and second front support elements engage the second surface. A center of gravity of the camera and the hinge member being adjacent and external to the first surface in combination with the first distance being greater than the second distance prevents rotation of the support frame along the axis substantially parallel to the second axis of rotation. In the preferred embodiment, when the support frame is in the

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second position, the object may be a display screen for a laptop computer, where the second surface is the front of the display screen and the first surface is the back of the display screen.

In the preferred embodiment, the support frame has means to releasably hold and protect the camera during storage. The camera may be rotated about the second axis in a direction from the first and second front support elements towards the rear support element of the support frame until the camera is in a position between and is releasably held by the rear support element and the first and second front support elements. In the preferred embodiment, the rear support element has means to protect a lens of the camera which is a cover mounted at a distal end of the rear support element. The lens of the camera faces a direction of rotation about the second axis from the first and second front support elements to the rear support element of the support frame to allow the lens of the camera to be fitably received into the cover when the camera is releasably held between the rear support element and the first and second front support elements.

In the preferred embodiment, the first and second front support elements are spaced a distance apart at a distance less than a diameter of a housing of the camera, where the camera is rotated about the second axis in the direction towards the rear support element so that the housing passes between the first and second front support elements. The first and second front support elements resiliently and outwardly flex to accommodate passage of the housing. The housing is releasably held after passing between the first and second front support elements by the rear support element engaging the housing at the lens, where the first and second front support elements engage the housing backside at a first indentation and a second indentation respectively to resiliently urge the housing towards the rear support element.

In the preferred embodiment, the hinge member is further comprised of a body having a proximal and a distal end where a pivot element at the proximal end of the body rotatably attaches the camera to the body so that the camera rotates about the first axis relative to the body. A hinge element at the distal end of the body hingedly attaches the body to the support frame so that the body rotates about the second axis relative to the support frame. In the preferred embodiment, the camera has an electrical wiring harness to couple from an interior to an exterior of the camera, and the pivot element has a bore parallel to the first axis of rotation to receive the electrical wiring harness to pass the wiring harness from the interior to the exterior of the camera.

BRIEF DESCRIPTION OF THE DRAWINGS

Other objects of the present invention and many of the attendant advantages of the present invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings, in which like reference numerals designate like parts throughout the figures thereof and wherein:

FIG. 1 is a perspective view of the "Camera Clip" invention;

FIG. 2 is a side view showing a first mode of a preferred embodiment of the present invention;

FIG. 3 is a detailed front view of the "Camera Clip" invention;

FIG. 4 is a side view showing a second mode of the preferred embodiment of the present invention;

FIG. 5 is a side view showing a third mode of the preferred embodiment of the present invention;

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FIG. 6 is a detailed side view showing the third mode wherein the lens of the camera is being fitably received by the cover; and

FIG. 7 is a front view showing the third mode of the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, wherein like reference numerals refer to like elements throughout the several views, FIG. 1 is a perspective view of the camera clip invention. FIG. 1 shows generally a camera apparatus 10 having a camera 12 and a camera clip 14. Camera clip 14 is further comprised of a hinge member 16 and a support frame 18. Camera 12 is comprised of housing 20 and lens 22, and has a housing backside 24 which is the side of the housing opposite of lens 22. Hinge member 16 is rotatably attached to camera 12, where camera 12 rotates over a first axis 26 in a direction shown by arrow 28 relative to hinge member 16. Support frame 18 is hingedly attached to hinge member 16 to engagingly support hinge member 16 on an object 30 (see also, FIG. 2). Hinge member 16 rotates over a second axis 32 in the direction shown by arrow 34 relative to support frame 18. First axis 26 is perpendicular to second axis 32. Second axis 32 is substantially parallel to a first surface 36 when hinge member 16 is engagingly supported on object 30 (see also, FIG. 2). Support frame 18 has a first portion consisting of first support element 38 and a second portion consisting of a first front support element 40 and a second front support element 42. Housing 20 has a first indentation 25 and a second indentation 27 to slidably and fitably receive distal end 41 of first front support element 40 and distal end 43 of second front support element 42 when first front support element 40 and second front support element 42 are rotated in the direction of arrow 34 to engage housing backside 24.

FIG. 2 is a side view showing a first mode of a preferred embodiment of the present invention. Rear support element 38, first front support element 40 and second front support element 42 support camera 12 in the first position 44, on the first surface 36, when rear support element 38, first front support element 40 and second front support element 42 are engaging first surface 36 and first surface 36 is substantially level. In the first position 44, camera 12 may be pivoted upon support frame 18 from a position 46 to a position 48. It is recognized that camera 12 may be pivoted to any number of positions about second axis 32 in the direction shown by arrow 34. In the preferred embodiment, rear support element 38, first front support element 40 and second front support element 42 support the camera in first position 44, on first surface 36, when rear support element 38, first front support element 40 and second front support element 42 engage first surface 36 at three locations in a plane 50 of first surface 36. Engagement of first surface 36 at three or more locations prevents rotation of support frame 18 relative to first surface 36 in any direction within plane 50 of first surface 36. It is understood that in the preferred embodiment, rear support element 38, first front support element 40 and second front support element 42 may utilize any number of desired geometries to engage first surface 36 to prevent rotation of support frame 18 relative to first surface 36 in any direction within plane 50 of first surface 36. In the preferred embodiment, when support frame 18 is in the first position 44, the object may be a top of a table and first surface 36 may be a top surface of the table. Likewise, object 30 may be a desk top, where first surface 36 is a top surface of the desk.

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FIG. 4 is a side view showing a second mode of the preferred embodiment of the present invention. The second mode occurs when rear support element 38, first front support element 40 and second front support element 42 support camera 12 in a second position 52 on a first surface 54 adjacent an edge 56. Second position 52 corresponds to first surface 54 being inclined from the substantially level position (see also, FIG. 2). In FIG. 4, object 58 has a second surface 60, where a thickness d1 between first surface 54 and second surface 60 defines the edge 56 therebetween. Camera 12 is maintained adjacent edge 56 in second position 52 when the uppermost portion of object 58 is edge 56. Rear support element 38 engages first surface 54, and first front support element 40 and second front support element 42 engage edge 56 and second surface 60. Rear support element 38, first front support element 40 and second front support element 42, in combination, maintain camera 12 adjacent edge 56 and prevent rotation of support frame 18 along an axis substantially parallel to second axis 32, where second axis 32 is substantially parallel to edge 56. Rear support element 38, first front support element 40 and second front support element 42 support camera 12 in second position 52 on the first surface 54 adjacent edge 56 when a first distance 64 measured between edge 56 and position 66 is greater than a second distance 68. Second distance 68 is measured between edge 56 and position 70, where first front support element 40 and second front support element 42 engage second surface 60. The center of gravity shown in the direction of arrow 72 of camera 12 and hinge member 16 being adjacent and external to first surface 54 in combination with first distance 64 being greater than second distance 68 prevent rotation in the direction of arrow 62 of support frame 18. In the preferred embodiment, object 58 may be a display screen for a laptop computer when support frame 18 is in second position 52, where second surface 60 is the front of the display screen and first surface 54 is the back of the display screen. FIG. 4 shows hinge member 16 comprised of a body 74 having a proximal end 76 and a distal end 78. A pivot element 80 at proximal end 76 of body 74 rotatably attaches camera 12 to body 74 so the camera may rotate about first axis 26 relative to body 74. A hinge element 82 at distal end 78 of body 74 hingedly attaches body 74 to support frame 18 so body 74 rotates about second axis 32 relative to support frame 18. FIG. 4 further shows camera 12 having an electrical wiring harness 84 to couple from an interior 86 to an exterior 88 of camera 12. Pivot element 80 has a bore 90 parallel to first axis 26 to receive electrical wiring harness 84 to pass wiring harness 84 from interior 86 to exterior 88 of camera 12. While the embodiments shown in the drawing figures and discussed herein illustrate a wiring harness 84 passing through a bore 90 parallel to first axis 26, it will be understood that other embodiments are contemplated. For example, wiring harness could enter body 74 at a location angularly spaced upward from bore 90.

FIGS. 5-7 show various perspectives of a third mode of the preferred embodiment of the present invention. FIG. 5 is a side view, FIG. 6 is a detailed side view showing the lens of the camera being fitably received by the cover, and FIG. 7 is a front view. The third mode of the preferred embodiment of the present invention is shown when camera 12 is rotated about second axis 32 along the direction shown by arrow 34 in a direction from the first front support element 40 and the second front support element 42 towards rear support element 38 of support frame 18. This rotation is continued in the third mode until camera 12 is in a position between rear support element 38 and first front support element 40 and second front support element 42. In this

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position, distal end 41 of first support element 40 and distal end 43 of second front support element 42 slidably and fitably engage first indentation 25 and second indentation 27 respectively of housing 20 at housing backside 24. Camera 12 is then releasably held between rear support element 38 and first front support element 40 and second front support element 42. Rear support element 38 further has means to protect a lens 22 of camera 12, which is cover 90. Cover 90 is mounted at a distal end 92 of rear support element 38. Lens 22 of camera 12 faces in the direction of arrow 92, which is the direction of rotation about second axis 32 from first front support element 40 and second front support element 42 to rear support element 38 of support frame 18. Cover 90 fitably receives lens 22 of camera 12. Cover 90 has a raised portion 95 sized to be accommodated by lens 22 of camera 12. Support frame 14, in a third mode of the preferred embodiment of the present invention, releasably holds and protects camera 12 during storage.

FIG. 3 is a detailed front view of the camera clip invention. FIG. 3 shows first front support element 40 and second front support element 42 being spaced a distance apart by a distance 94. Camera 12 further has a housing 20 which may be spherical in shape in the preferred embodiment. Housing 20 has a diameter shown as distance 96, wherein the preferred embodiment, distance 96 is greater than distance 94. When camera 12 is rotated about the second axis 32 in the direction towards rear support element 38 in the direction of arrow 92 so that housing 20 passes between first front support element 40 and second front support element 42, first front support element 40 and second front support element 42 resiliently and outwardly flex to accommodate passage of housing 20. Housing 20 is releasably held once passing between first front support element 40 and second front support element 42 by rear support element 38 engaging housing 20 at lens 22 and distal end 41 of first front support element 40 and distal end 43 of second front support element 42 slidably and fitably engaging first indentation 25 and second indentation 27 respectively of housing 20 at housing backside 24. When housing 20 is releasably held, first front support element 40 and second front support element 42 resiliently urge housing 20 towards rear support element 38 so that lens 22 of camera 12 is fitably received into cover 90.

Having thus described the preferred embodiments of the present invention, those of skill in the art will readily appreciate that yet other embodiments may be made and used within the scope of the claims hereto attached.

What is claimed:

1. Apparatus for supporting a camera, having a lens, on any generally horizontal, substantially planar surface and on an object having a first surface and a second surface and an edge intersecting the first surface and the second surface, comprising:
 - a hinge member adapted to be rotatably attached to the camera, said camera, when the hinge member is so attached, rotating, about a first axis of rotation, relative to said hinge member; and
 - a support frame rotatably attached to said hinge member and configured to support said hinge member on the surface and the object, said hinge member rotating about a second axis of rotation relative to said support frame, said first axis of rotation being generally perpendicular to said second axis of rotation, said second axis of rotation being substantially parallel to the first surface when said hinge member is supported on the object, said support frame having a first disposition positioned on said generally horizontal, substantially

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planar surface, and said support frame having a second disposition attached to the object when said first surface and said second surface are inclined from a generally horizontal orientation, the camera being maintained adjacent said edge in said second disposition of said support frame.

2. Apparatus according to claim 1 wherein the support frame comprises a first portion and a second portion, the support frame being in the first disposition on the generally horizontal, substantially planar surface when distal extremities of said first portion and said second portion are engaging the generally horizontal, substantially planar surface, and the support frame being in the second disposition on the object when said first portion is engaging the first surface and said second portion is engaging the second surface, said first portion and said second portion in combination maintaining the camera adjacent the edge.

3. Apparatus according to claim 2 wherein the support frame includes a cover adapted to protect the camera lens when the camera is rotated about the second axis until the camera is between the first portion and the second portion.

4. Apparatus according to claim 3 wherein the first portion of the support frame further includes said cover, said cover being mounted at the distal end of the first portion and adapted the lens of the camera.

5. Apparatus according to claim 2 wherein the support frame is in the first disposition when the first portion and the second portion engage the generally horizontal, substantially planar surface at three or more locations in a common plane, thereby preventing rotation of the support frame relative to the generally horizontal, substantially planar surface in any direction.

6. Apparatus according to claim 2 wherein the support frame is in the second disposition when a first distance from the edge to a location where the first portion engages the first surface is greater than a second distance from the edge to a location where the second portion engages the second surface, thus preventing rotation of the support frame.

7. Apparatus according to claim 1 wherein the object is a display screen for a laptop computer, and the second surface is the front of the display screen and the first surface is the back of the display screen.

8. Apparatus according to claim 1 wherein the hinge member includes a body having a proximal and a distal end, a pivot element at said proximal end of said body adapted to rotatably attach the camera to the body so that the camera rotates about the first axis relative to the body, and a hinge element at said distal end of said body hingedly attaching said body to the support frame so that said body rotates, about the second axis, relative to the support frame.

9. Apparatus according to claim 8 wherein the pivot element has a bore along the first axis of rotation to receive an electrical wiring harness and pass said wiring harness to the camera.

10. Apparatus for supporting a camera, having a housing and a lens, on any generally horizontal, substantially planar surface and on an object having a first surface and a second surface, and an edge intersecting the first surface and the second surface, comprising:

- a. a hinge member adapted to be rotatably attached to the camera, said camera, when the hinge member is so attached, rotating, about a first axis of rotation relative to said hinge member; and
- b. a support frame rotatably attached to said hinge member and configured to support said hinge member on the surface and the object, said hinge member rotating about a second axis of rotation relative to said support

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frame, said first axis of rotation being generally perpendicular to said second axis of rotation, said second axis of rotation being substantially parallel to the first surface when said hinge member is supported on the object, the support frame having a rear support element and a first and a second front support element, said support frame having a first disposition positioned on said generally horizontal, substantially planar surface when said rear support element and said first and second front support elements are engaging said generally horizontal, substantially planar surface, said support frame having a second disposition attached to the object when the first surface is inclined from a substantially horizontal position so that an uppermost extremity of the object is the edge, the support frame being maintained in said second disposition by said rear support element engaging said first surface and said first and second front support elements engaging the second surface, said rear support element and said first and second front support elements in combination preventing rotation of the support frame.

11. Apparatus according to claim 10 wherein the support frame adapted to protect the camera when the camera is rotated about the second axis towards the rear support element of the support frame until the camera is between the rear support element and the first and second front support elements, and is releasably held between the rear support element and the first and second front support elements.

12. Apparatus according to claim 11 wherein the first and second front support elements are spaced a distance apart, and wherein said distance is less than a diameter of the housing of the camera so that as the camera is being rotated about the second axis in the direction towards the rear support element, said housing passes between the first and second front support elements and the first and second front support elements resiliently flex outwardly to accommodate passage of said housing, said housing being releasably held once passing between the first and second front support elements by the rear support element engaging said housing at the lens.

13. Apparatus according to claim 11 wherein the first portion of the support frame further has a cover, said cover being mounted at a distal end of the rear support element and adapted to receive the lens of the camera when the camera is releasably held between the rear support element and the first and second front support elements.

14. Apparatus according to claim 10 wherein the support frame is in the first disposition when the rear support element and the first and second front support elements engage the generally horizontal, substantially planar surface at three or more locations in a common plane of the generally horizontal, substantially planar surface to prevent rotation of the support frame relative to the generally horizontal, substantially planar surface.

15. Apparatus according to claim 10 wherein the support frame is in the first disposition positioned on the generally horizontal, substantially planar surface when the rear support element and the first and second front support elements engage the generally horizontal, substantially planar surface to prevent rotation of the support frame relative to the generally horizontal, substantially planar surface.

16. Apparatus according to claim 10 wherein support frame is in the second disposition when a first distance from the edge to a location where the rear support element engages the first surface is greater than a second distance from the edge to a location where the first and second front support elements engage the second surface, the first dis-

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tance being greater than the second distance thus preventing rotation of the support frame.

17. Apparatus according to claim 10 wherein the hinge member includes a body having a proximal and a distal end, a pivot element at said proximal end of said body adapted to rotatably attach the camera to the body so that the camera rotates about the first axis relative to the body, and a hinge element at said distal end of said body hingedly attaching said body to the support frame so that said body rotates about the second axis relative to the support frame.

18. Apparatus according to claim 17 wherein the pivot element has a bore along the first axis of rotation to receive said electrical wiring harness and pass said wiring harness to the camera.

19. A camera clip for supporting a camera on a laptop computer, the laptop computer having a display screen which can be inclined from a generally horizontal position, an uppermost portion of the display screen defining an edge, comprising:

a. a hinge member adapted to be rotatably attached to the camera, said camera rotating about a first axis of rotation relative to said hinge member;

and

b. a support frame hingedly attached to said hinge member to engagingly support said hinge member on the display screen, said hinge member rotating over a second axis of rotation relative to said support frame, the camera being maintained adjacent the edge, rotation of said support frame being prevented along an axis substantially parallel to said second axis where said second axis is substantially parallel to said edge.

20. Apparatus for supporting a camera having a lens on a substantially level surface, comprising:

a. a hinge member adapted to be rotatably attached to the camera, the camera rotating about a first axis of rotation relative to said hinge member; and

b. a support frame rotatably attached to said hinge member and configured to support said hinge member on a generally horizontal, substantially planar surface, said hinge member rotating about a second axis of rotation relative to said support frame, said first axis of rotation being generally perpendicular to said second axis of rotation, said second axis of rotation being substantially parallel to the generally horizontal, substantially planar surface when said hinge member is supported on the generally horizontal, substantially planar surface, said

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support frame having a first portion and a second portion wherein said support frame protects the camera when said hinge member is not supported on the generally horizontal, substantially planar surface, and when the camera is rotated around said second axis in a direction from said second portion towards said first portion of said support frame until the camera is between said first portion and said second portion and is releasably held between said first portion and said second portion.

21. Apparatus for supporting a camera, having a lens, on an object having a first surface and a second surface, wherein a thickness measured between the first surface and the second surface defines an edge therebetween, comprising:

a. a hinge member adapted to be rotatably attached to the camera, said camera, when the hinge member is so adapted, rotating about a first axis of rotation relative to said hinge member; and

b. a support frame rotatably attached to said hinge member and configured to support said hinge member on the object, said hinge member rotating about a second axis of rotation relative to said support frame, said first axis of rotation being generally perpendicular to said second axis of rotation, said second axis of rotation being substantially parallel to the first surface when said hinge member is supported by said support frame on the object, said support frame supporting said hinge member on the object when said first surface is inclined from a substantially horizontal position, the camera being maintained adjacent the edge when an uppermost extremity of the object is the edge, rotation of said support frame being precluded about an axis substantially parallel to said second axis, said second axis being substantially parallel to said edge, said support frame having a first portion and a second portion wherein said support frame releasably holds and protects the camera when said hinge member is not supported by said support frame on the object and the camera is rotated around said second axis in a direction from said second portion towards said first portion of said support frame until the camera is between said first portion and said second portion and is releasably held between said first portion and said second portion.

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Abstract of the Disclosure

A clip for supporting a portable camera either on a surface or on an edge of a housing, and for protecting the lens of the camera when the camera is not being supported.

- 5 The clip provides two axis of rotation to position the camera to any desired viewing angle. The clip may be rotated to a first position to support the camera on a surface of a table or desk. The clip may be rotated to a second position to support the camera on the display screen of a laptop computer.
- 10 When the camera is not being supported in the first position or the second position, the camera may be rotated to be releasably held by the clip to protect the camera and lens during storage.

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CAMERA CLIP

Field of the Invention

This invention relates to a clip for holding a camera. More particularly it relates to a clip for supporting a 5 portable camera either on a surface or on an edge of a housing, and for protecting the lens of the camera when the camera is not being supported.

Background of the Invention

With portable cameras, it is desirable to have an 10 apparatus which can support the camera in any number of desired configurations. The apparatus must easily accommodate repositioning the camera to new orientations during use, and must be easily transportable. This is especially true when using the camera with a portable computer, such as a laptop 15 computer. With increasing improvements in technology, both the laptop computer and camera have become smaller over time, emphasizing the need for a compatible camera support apparatus. The camera support apparatus must be versatile, light in weight, and be easily transportable to accommodate 20 the new camera and laptop designs, and must desirably facilitate easy and safe storage of the camera. Often times portable computers are stored in carry bags which may be fully loaded with other hardware devices, such as disk drives or printers, as well as with personal effects, making for cramped 25 storage conditions. The camera support apparatus must desirably protect the camera from damage during transport under these cramped storage conditions to avoid the necessity

for separate storage means in order to maintain camera portability.

In the past, camera support apparatus were not easily transportable. Often times these apparatus utilized designs which incorporated a tripod approach, or which used one or more telescoping arms to support the camera. These designs attempted to support the camera during use, and then collapse to a smaller size to facilitate storage or transportation. While these designs were transportable, often times even the collapsed size of the prior art camera support apparatus could not be easily accommodated by a laptop computer bag. These prior art apparatus also did not provide means to protect the camera during transport, and if constructed of hard, exposed materials, tended to damage the cameras.

Another problem with prior art camera support apparatus was that they could not easily accommodate the variety of applications desired for portable cameras. These applications ranged from supporting the camera on the surface of a desk or table to supporting the camera on the upright display screen of a laptop computer. With the prior art, often times more than one camera support apparatus was necessary in order to support the desired range of applications. This unfortunately adversely impacted portability of the camera.

Thus, a desire was created within the industry for a small, easily transportable camera support apparatus for supporting the camera on both horizontal surfaces, such as the

surface of a desk or table, and vertical surfaces, such as the display screen of a laptop computer, and to protect the camera during storage and transport.

Summary of the Invention

5 Accordingly, it is an object of the invention to provide a clip for supporting a portable camera either on a surface or on an edge of a housing, and for protecting the lens of the camera when the camera is not being supported. The clip provides two axis of rotation to position the camera to any
10 desired viewing angle. The clip may be rotated to a first position to support the camera on a surface of a table or desk. The clip may be rotated to a second position to support the camera on a display screen of a laptop computer. When the camera is not being supported in the first position or the
15 second position, the camera may be rotated to be releasably held by the clip to protect the camera and lens during storage.

In a preferred embodiment of the present invention, an apparatus is provided for supporting a camera on an object
20 where the apparatus comprises a hinge member and a support frame. The hinge member is rotatably attached to the camera where the camera rotates over a first axis of rotation relative to the hinge member. A support frame is hingedly attached to the hinge member to engagingly support the hinge member on the object, where the hinge member rotates over a
25 second axis of rotation relative to the support frame. The

first axis of rotation is perpendicular to the second axis of rotation, and the second axis of rotation is substantially parallel to a first surface of the object when the hinge member is engagingly supported on the object. In the 5 preferred embodiment, the support frame further has a rear support element and first and second front support elements. In the preferred embodiment, the rear support element and the first and second front support elements support the camera in the first position on the first surface when the rear support 10 element and the first and second front support elements are engaging the first surface when the first surface is substantially level. In the preferred embodiment, the rear support element and the first and second front support elements engage the first surface at three locations in a plane of the first surface to prevent rotation of the support 15 frame relative to the first surface in any direction within the plane of the first surface. In the preferred embodiment, when the support frame is in the first position, the object may be the top of a table where the first surface is a top 20 surface of the table. The object may also be a desk top where the first surface is a top surface of the desk.

In the preferred embodiment, the rear support element and the first and second front support elements support the camera in a second position on the first surface adjacent an edge 25 when the first surface is inclined from the substantially level position. The object has a second surface wherein a

thickness between the first surface and the second surface defines an edge therebetween. The camera is maintained adjacent to the edge in the second position where the uppermost portion of the object is the edge. The rear support element engages a first surface and the first and second support elements engage the edge and the second surface. The rear support element and the first and second front support elements, in combination, maintain the camera adjacent the edge and prevent rotation of the support frame along an axis substantially parallel to the second axis where the second axis is substantially parallel to the edge. In a preferred embodiment, the rear support element and the first and second front support elements support the camera in the second position on the first surface adjacent the edge when a first distance from the edge to the position where the rear support element engages the first surface is greater than a second distance from the edge to the position where the first and second front support elements engage the second surface. A center of gravity of the camera and the hinge member being adjacent and external to the first surface in combination with the first distance being greater than the second distance prevents rotation of the support frame along the axis substantially parallel to the second axis of rotation. In the preferred embodiment, when the support frame is in the second position, the object may be a display screen for a laptop computer, where the second surface is the front of the display

screen and the first surface is the back of the display screen.

In the preferred embodiment, the support frame has means to releasably hold and protect the camera during storage. The
5 camera may be rotated about the second axis in a direction from the first and second front support elements towards the rear support element of the support frame until the camera is in a position between and is releasably held by the rear support element and the first and second front support elements.
10 In the preferred embodiment, the rear support element has means to protect a lens of the camera which is a cover mounted at a distal end of the rear support element. The lens of the camera faces a direction of rotation about the second axis from the first and second front support elements
15 to the rear support element of the support frame to allow the lens of the camera to be fitably received into the cover when the camera is releasably held between the rear support element and the first and second front support elements.

In the preferred embodiment, the first and second front support elements are spaced a distance apart at a distance less than a diameter of a housing of the camera, where the camera is rotated about the second axis in the direction towards the rear support element so that the housing passes between the first and second front support elements. The
20 first and second front support elements resiliently and outwardly flex to accommodate passage of the housing. The
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housing is releasably held after passing between the first and second front support elements by the rear support element engaging the housing at the lens, where the first and second front support elements engage the housing backside at a first indentation and a second indentation respectively to resiliently urge the housing towards the rear support element.

In the preferred embodiment, the hinge member is further comprised of a body having a proximal and a distal end where a pivot element at the proximal end of the body rotatably attaches the camera to the body so that the camera rotates about the first axis relative to the body. A hinge element at the distal end of the body hingedly attaches the body to the support frame so that the body rotates about the second axis relative to the support frame. In the preferred embodiment, the camera has an electrical wiring harness to couple from an interior to an exterior of the camera, and the pivot element has a bore parallel to the first axis of rotation to receive the electrical wiring harness to pass the wiring harness from the interior to the exterior of the camera.

Brief Description of the Drawings

Other objects of the present invention and many of the attendant advantages of the present invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings, in which like reference numerals designate like parts throughout the figures

thereof and wherein:

FIG. 1 is a perspective view of the "Camera Clip" invention;

5 FIG. 2 is a side view showing a first mode of a preferred embodiment of the present invention;

FIG. 3 is a detailed front view of the "Camera Clip" invention;

10 FIG. 4 is a side view showing a second mode of the preferred embodiment of the present invention;

FIG. 5 is a side view showing a third mode of the preferred embodiment of the present invention;

15 FIG. 6 is a detailed side view showing the third mode wherein the lens of the camera is being fitably received by the cover; and

FIG. 7 is a front view showing the third mode of the preferred embodiment of the present invention.

Detailed Description of the Preferred Embodiments

Referring now to the drawings, wherein like reference numerals refer to like elements throughout the several views,

20 Fig. 1 is a perspective view of the camera clip invention.

Fig. 1 shows generally a camera apparatus 10 having a camera 12 and a camera clip 14. Camera clip 14 is further comprised of a hinge member 16 and a support frame 18. Camera 12 is comprised of housing 20 and lens 22, and has a housing backside 24 which is the side of the housing opposite of lens 22. Hinge member 16 is rotatably attached to camera 12, where

camera 12 rotates over a first axis 26 in a direction shown by arrow 28 relative to hinge member 16. Support frame 18 is hingedly attached to hinge member 16 to engagingly support hinge member 16 on an object 30 (see also, Fig. 2). Hinge member 16 rotates over a second axis 32 in the direction shown by arrow 34 relative to support frame 18. First axis 26 is perpendicular to second axis 32. Second axis 32 is substantially parallel to a first surface 36 when hinge member 16 is engagingly supported on object 30 (see also, Fig. 2).

Support frame 18 has a first portion consisting of first support element 38 and a second portion consisting of a first front support element 40 and a second front support element 42. Housing 20 has a first indentation 25 and a second indentation 27 to slidably and fittably receive distal end 41 of first front support element 40 and distal end 43 of second front support element 42 when first front support element 40 and second front support element 42 are rotated in the direction of arrow 34 to engage housing backside 24.

Fig. 2 is a side view showing a first mode of a preferred embodiment of the present invention. Rear support element 38, first front support element 40 and second front support element 42 support camera 12 in the first position 44, on the first surface 36, when rear support element 38, first front support element 40 and second front support element 42 are engaging first surface 36 and first surface 36 is substantially level. In the first position 44, camera 12 may

be pivoted upon support frame 18 from a position 46 to a position 48. It is recognized that camera 12 may be pivoted to any number of positions about second axis 32 in the direction shown by arrow 34. In the preferred embodiment, 5 rear support element 38, first front support element 40 and second front support element 42 support the camera in first position 44, on first surface 36, when rear support element 38, first front support element 40 and second front support element 42 engage first surface 36 at three locations in a 10 plane 50 of first surface 36. Engagement of first surface 36 at three or more locations prevents rotation of support frame 18 relative to first surface 36 in any direction within plane 50 of first surface 36. It is understood that in the preferred embodiment, rear support element 38, first front support element 40 and second front support element 42 may 15 utilize any number of desired geometries to engage first surface 36 to prevent rotation of support frame 18 relative to first surface 36 in any direction within plane 50 of first surface 36. In the preferred embodiment, when support frame 18 is in the first position 44, the object may be a top of a 20 table and first surface 36 may be a top surface of the table. Likewise, object 30 may be a desk top, where first surface 36 is a top surface of the desk.

Fig. 4 is a side view showing a second mode of the 25 preferred embodiment of the present invention. The second mode occurs when rear support element 38, first front support

element 40 and second front support element 42 support camera 12 in a second position 52 on a first surface 54 adjacent an edge 56. Second position 52 corresponds to first surface 54 being inclined from the substantially level position (see 5 also, Fig. 2). In Fig. 4, object 58 has a second surface 60, where a thickness d1 between first surface 54 and second surface 60 defines the edge 56 therebetween. Camera 12 is maintained adjacent edge 56 in second position 52 when the uppermost portion of object 58 is edge 56. Rear support 10 element 38 engages first surface 54, and first front support element 40 and second front support element 42 engage edge 56 and second surface 60. Rear support element 38, first front support element 40 and second front support element 42, in combination, maintain camera 12 adjacent edge 56 and prevent 15 rotation of support frame 18 along an axis substantially parallel to second axis 32, where second axis 32 is substantially parallel to edge 56. Rear support element 38, first front support element 40 and second front support element 42 support camera 12 in second position 52 on the first surface 54 adjacent edge 56 when a first distance 64 measured between edge 56 and position 66 is greater than a 20 second distance 68. Second distance 68 is measured between edge 56 and position 70, where first front support element 40 and second front support element 42 engage second surface 60. 25 The center of gravity shown in the direction of arrow 72 of camera 12 and hinge member 16 being adjacent and external to

first surface 54 in combination with first distance 64 being greater than second distance 68 prevent rotation in the direction of arrow 62 of support frame 18. In the preferred embodiment, object 58 may be a display screen for a laptop computer when support frame 18 is in second position 52, where second surface 60 is the front of the display screen and first surface 54 is the back of the display screen. Fig. 4 shows hinge member 16 comprised of a body 74 having a proximal end 76 and a distal end 78. A pivot element 80 at proximal end 76 of body 74 rotatably attaches camera 12 to body 74 so the camera may rotate about first axis 26 relative to body 74. A hinge element 82 at distal end 78 of body 74 hingedly attaches body 74 to support frame 18 so body 74 rotates about second axis 32 relative to support frame 18. Fig. 4 further shows camera 12 having an electrical wiring harness 84 to couple from an interior 86 to an exterior 88 of camera 12. Pivot element 80 has a bore 90 parallel to first axis 26 to receive electrical wiring harness 84 to pass wiring harness 84 from interior 86 to exterior 88 of camera 12. While the embodiments shown in the drawing figures and discussed herein illustrate a wiring harness 84 passing through a bore 90 parallel to first axis 26, it will be understood that other embodiments are contemplated. For example, wiring harness could enter body 74 at a location angularly spaced upward from bore 90.

Figs. 5-7 show various perspectives of a third mode of

the preferred embodiment of the present invention. Fig. 5 is a side view, Fig. 6 is a detailed side view showing the lens of the camera being fitably received by the cover, and Fig. 7 is a front view. The third mode of the preferred embodiment of the present invention is shown when camera 12 is rotated about second axis 32 along the direction shown by arrow 34 in a direction from the first front support element 40 and the second front support element 42 towards rear support element 38 of support frame 18. This rotation is continued in the 5 third mode until camera 12 is in a position between rear support element 38 and first front support element 40 and second front support element 42. In this position, distal end 41 of first support element 40 and distal end 43 of second front support element 42 slidably and fitably engage first 10 indentation 25 and second indentation 27 respectively of housing 20 at housing backside 24. Camera 12 is then releasably held between rear support element 38 and first front support element 40 and second front support element 42. Rear support element 38 further has means to protect a lens 22 15 of camera 12, which is cover 90. Cover 90 is mounted at a distal end 92 of rear support element 38. Lens 22 of camera 20 12 faces in the direction of arrow 92, which is the direction of rotation about second axis 32 from first front support element 40 and second front support element 42 to rear support 25 element 38 of support frame 18. Cover 90 fitably receives lens 22 of camera 12. Cover 90 has a raised portion 95 sized

to be accommodated by lens 22 of camera 12. Support frame 14, in a third mode of the preferred embodiment of the present invention, releasably holds and protects camera 12 during storage.

5 Fig. 3 is a detailed front view of the camera clip invention. Fig. 3 shows first front support element 40 and second front support element 42 being spaced a distance apart by a distance 94. Camera 12 further has a housing 20 which may be spherical in shape in the preferred embodiment.
10 Housing 20 has a diameter shown as distance 96, wherein the preferred embodiment, distance 96 is greater than distance 94. When camera 12 is rotated about the second axis 32 in the direction towards rear support element 38 in the direction of arrow 92 so that housing 20 passes between first front support
15 element 40 and second front support element 42, first front support element 40 and second front support element 42 resiliently and outwardly flex to accommodate passage of housing 20. Housing 20 is releasably held once passing between first front support element 40 and second front support element 42 by rear support element 38 engaging housing 20 at lens 22 and distal end 41 of first front support element 40 and distal end 43 of second front support element 42 slidably and fittably engaging first indentation 25 and second indentation 27 respectively of housing 20 at housing backside
20 24. When housing 20 is releasably held, first front support element 40 and second front support element 42 resiliently

urge housing 20 towards rear support element 38 so that lens 22 of camera 12 is fitably received into cover 90.

Having thus described the preferred embodiments of the present invention, those of skill in the art will readily appreciate that yet other embodiments may be made and used within the scope of the claims hereto attached.

What is Claimed:

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1. An apparatus for supporting a camera on an object, comprising:
 - a. a hinge member rotatably attached to the camera, said camera rotating over a first axis of rotation relative to said hinge member; and
 - b. a support frame hingedly attached to said hinge member to engagingly support said hinge member on the object, said hinge member rotating over a second axis of rotation relative to said support frame, said first axis of rotation being perpendicular to said second axis of rotation, said second axis of rotation being substantially parallel to a first surface when said hinge member is engagingly supported on the object, said support frame supporting said camera in a first position on the object when said first surface is substantially level, said support frame supporting the camera in a second position on the object when said first surface is inclined from said substantially level position, the object having a second surface wherein a thickness between the first surface and said second surface defines an edge therebetween, the camera being maintained adjacent said edge in said second position when the uppermost portion of the object is the edge, rotation of said support

frame being prevented along an axis substantially parallel to said second axis, said second axis being substantially parallel to said edge.

2. An apparatus according to claim 1 wherein the support frame comprises a first portion and a second portion, said first portion and said second portion supporting the camera in the first position on the first surface when said first portion and said second portion are engaging the first surface when the first surface is substantially level, said first portion and said second portion supporting the camera in the second position on the first surface adjacent the edge when said first portion is engaging the first surface and said second portion is engaging the edge and the second surface, said first portion and said second portion in combination maintaining the camera adjacent the edge and preventing rotation of the support frame along the axis substantially parallel to the second axis.
3. An apparatus according to claim 2 wherein the support frame has means to releasably hold and protect the camera during storage.
4. An apparatus according to claim 3 wherein the means to releasably hold and protect the camera comprises the

camera being rotated around the second axis in a direction from the second portion towards the first portion of the support frame until the camera is in a position between the first portion and the second portion and is releasably held between the first portion and the second portion, the first portion having means to protect a lens of the camera.

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5. An apparatus according to claim 4 wherein the means to protect the lens of the camera is a cover mounted at the distal end of the first portion, the lens of the camera facing in the direction of rotation about the second axis from the second portion to the first portion of the support frame to allow the lens of the camera to be fitably received into said cover when the camera is releasably held between the first portion and the second portion.
 6. An apparatus according to claim 2 wherein the first portion and the second portion support the camera in the first position on the first surface when the first portion and the second portion engage the first surface at three or more locations in a plane of the first surface to prevent rotation of the support frame relative to the first surface in any direction within said plane of the first surface.

7. An apparatus according to claim 2 wherein the first portion and the second portion support the camera in the first position on the first surface when the first portion and the second portion engage the first surface to prevent rotation of the support frame relative to the first surface in any direction within a plane of the first surface.
8. An apparatus according to claim 2 wherein the first portion and the second portion support the camera in the second position on the first surface adjacent the edge when a first distance from the edge to the position where the first portion engages the first surface is greater than a second distance from the edge to the position where the second portion engages the second surface, a center of gravity of the camera and said hinge member being adjacent and external to the first surface in combination with the first distance being greater than the second distance preventing rotation of the support frame along an axis substantially parallel to the second axis of rotation.
9. An apparatus according to claim 1 wherein the object is a top of a table when the support frame is in the first position, the first surface being a top surface of the table.

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10. An apparatus according to claim 1 wherein the object is a desk top when the support frame is in the first position, the first surface being a top surface of the desk.
 11. An apparatus according to claim 1 wherein the object is a display screen for a laptop computer when the support frame is in the second position, the second surface being the front of the display screen and the first surface being the back of the display screen.
 12. An apparatus according to claim 1 wherein the hinge member is comprised of a body having a proximal and a distal end, a pivot element at said proximal end of said body rotatably attaching the camera to the body so that the camera rotates about the first axis relative to the body, a hinge element at said distal end of said body hingedly attaching said body to the support frame so that said body rotates about the second axis relative to the support frame.
 13. An apparatus according to claim 12 wherein the camera has an electrical wiring harness to couple from an interior to an exterior, the pivot element having a bore parallel to the first axis of rotation to receive said electrical wiring harness to pass said wiring harness from said

interior to said exterior of the camera.

14. An apparatus for supporting a camera on an object, comprising:

- a. a hinge member rotatably attached to the camera, said camera rotating over a first axis of rotation relative to said hinge member; and
- b. a support frame hingedly attached to said hinge member to engagingly support said hinge member on the object, said hinge member rotating over a second axis of rotation relative to said support frame, said first axis of rotation being perpendicular to said second axis of rotation, said second axis of rotation being substantially parallel to a first surface when said hinge member is engagingly supported on the object, the support frame having a rear support element and a first and second front support element, said rear support element and said first and said second front support elements supporting the camera in the first position on said first surface when said rear support element and said first and second front support elements are engaging said first surface when said first surface is substantially level, said rear support element and said first and said second front support elements supporting the camera

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in a second position on said first surface adjacent an edge when said first surface is inclined from said substantially level position, the object having a second surface wherein a thickness between said first surface and said second surface defines said edge therebetween, the camera being maintained adjacent said edge in said second position when the uppermost portion of the object is the edge, said rear support element engaging said first surface and said first and second front support elements engaging the edge and the second surface, said rear support element and said first and second front support elements in combination maintaining the camera adjacent the edge and preventing rotation of the support frame along an axis substantially parallel to the second axis, said second axis being substantially parallel to said edge.

15. An apparatus according to claim 14 wherein the support frame has means to releasably hold and protect the camera during storage.

16. An apparatus according to claim 15 wherein the means to releasably hold and protect the camera comprises the camera being rotated around the second axis in a direction from the first and second front support

elements towards the rear support element of the support frame until the camera is in a position between the rear support element and the first and second front support elements and is releasably held between the rear support element and the first and second front support elements, the rear support element having means to protect a lens of the camera.

17. An apparatus according to claim 16 wherein the first and second front support elements are spaced a distance apart at a distance less than a diameter of a housing of the camera, the camera being rotated around the second axis in the direction towards the rear support element so that said housing passes between the first and second front support elements, the first and second front support elements resiliently and outwardly flexing to accommodate passage of said housing, said housing being releasably held once passing between the first and second front support elements by the rear support element engaging said housing at the lens, the first and second front support elements engaging said housing backside to resiliently urge said housing towards the rear support element.
- DWG A*

18. An apparatus according to claim 16 wherein the means to protect the lens of the camera is a cover mounted at the

DWJ AS

distal end of the rear support element, the lens of the camera facing in the direction of rotation about the second axis from the first and second front support elements to the rear support element of the support frame to allow the lens of the camera to be fitably received into said cover when the camera is releasably held between the rear support element and the first and second front support elements.

- Continued*
19. An apparatus according to claim 14 wherein the rear support element and the first and second front support elements support the camera in the first position on the first surface when the rear support element and the first and second front support elements engage the first surface at three or more locations in a plane of the first surface to prevent rotation of the support frame relative to the first surface in any direction within said plane of the first surface.
 20. An apparatus according to claim 14 wherein the rear support element and the first and second front support elements support the camera in the first position on the first surface when the rear support element and the first and second front support elements engage the first surface to prevent rotation of the support frame relative to the first surface in any direction within a plane of

the first surface.

21. An apparatus according to claim 14 wherein the rear support element and the first and second front support elements support the camera in the second position on the first surface adjacent the edge when a first distance from the edge to the position where the rear support element engages the first surface is greater than a second distance from the edge to the position where the first and second front support elements engage the second surface, a center of gravity of the camera and said hinge member being adjacent and external to the first surface in combination with the first distance being greater than the second distance preventing rotation of the support frame along an axis substantially parallel to the second axis of rotation.
22. An apparatus according to claim 14 wherein the object is a top of a table when the support frame is in the first position, the first surface being a top surface of the table.
23. An apparatus according to claim 14 wherein the object is a desk top when the support frame is in the first position, the first surface being a top surface of the desk.

24. An apparatus according to claim 14 wherein the object is a display screen for a laptop computer when the support frame is in the second position, the second surface being the front of the display screen and the first surface being the back of the display screen.

Draft 4 25. An apparatus according to claim 14 wherein the hinge member is comprised of a body having a proximal and a distal end, a pivot element at said proximal end of said body rotatably attaching the camera to the body so that the camera rotates about the first axis relative to the body, a hinge element at said distal end of said body hingedly attaching said body to the support frame so that said body rotates about the second axis relative to the support frame.

26. An apparatus according to claim 25 wherein the camera has an electrical wiring harness to couple from an interior to an exterior, the pivot element having a bore parallel to the first axis of rotation to receive said electrical wiring harness to pass said wiring harness from said interior to said exterior of the camera.

*adv
a7*

COMBINED DECLARATION/POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled CAMERA CLIP, the specification of which (check one)

XX is attached hereto

 was filed on _____
as U.S. Application
Serial No. _____

 and was amended on (if
applicable) _____

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefit(s) under Title 35, United States Code §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application(s) for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)	Priority Claimed
------------------------------	------------------

(Number)	(Country)	(Day/Month/Year Filed)	YES	NO
(Number)	(Country)	(Day/Month/Year Filed)	YES	NO
(Number)	(Country)	(Day/Month/Year Filed)	YES	NO

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which

occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
--------------	---------------	---

(Serial No.)	(Filing Date)	(Status-patented, pending, abandoned)
--------------	---------------	---------------------------------------

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

John L. Rooney, Reg. No. 28,898;
Lawrence M. Nawrocki, Reg. No. 29,333;
Wayne A. Sivertson, Reg. No. 25,645;
David M. Crompton, Reg. No. 36,772;
Glenn M. Seager, Reg. No. 36,926;
Steven E. Dicke, Reg. No. 38,431;
Brian N. Tufte, Reg. No. 38,638;
Craig F. Taylor, Reg. No. 40,199;
Donald A. Jacobson, Reg. No. 22,308; and
Lew Schwartz, Reg. No. 22,067

Send correspondence to:

Lawrence M. Nawrocki
NAWROCKI, ROONEY & SIVERTSON, P.A.
Suite 401, Broadway Place East
3433 Broadway Street Northeast
Minneapolis, Minnesota 55413
(612) 331-1464

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon, I further declare that I understand the content of this declaration.

Full name of sole or first inventor David E. Krekelberg
Inventor's Signature _____ Date _____
Residence 15604 Dawn Drive, Minnetonka, Minnesota 55345 Citizenship U.S.A.
Post Office Address 15604 Dawn Drive
Minnetonka, Minnesota 55345

-3-

1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

- (i) Opposing an argument of unpatentability relied on by the Office, or
- (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application;

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

67137 U.S. PTO



03/07/97

Applicant or Patentee: David E. Krekelberg Attorney's Docket No.: 19139/103/101

Serial or Patent No.: N/A

Filed or Issued: Herewith

For: CAMERA CLIP

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY
STATUS (37 CFR 1.9(f) AND 1.27(c)) -- SMALL BUSINESS CONCERN

I hereby declare that I am

- the owner of the small business concern identified below;
 an official of the small business concern empowered to act
on behalf of the concern identified below:

NAME OF CONCERN iREZ Research, Corporation

ADDRESS OF CONCERN 15604 Dawn Drive, Minnetonka, Minnesota 55345

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled CAMERA CLIP by inventor(s) David E. Krekelberg described in

- the specification filed herewith
 application serial no. _____, filed _____
 patent no. _____, issued _____

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(b) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME _____

ADDRESS _____

INDIVIDUAL SMALL BUSINESS CONCERN NONPROFIT ORGANIZATION

NAME _____

ADDRESS _____

INDIVIDUAL SMALL BUSINESS CONCERN NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue

fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate.
(37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

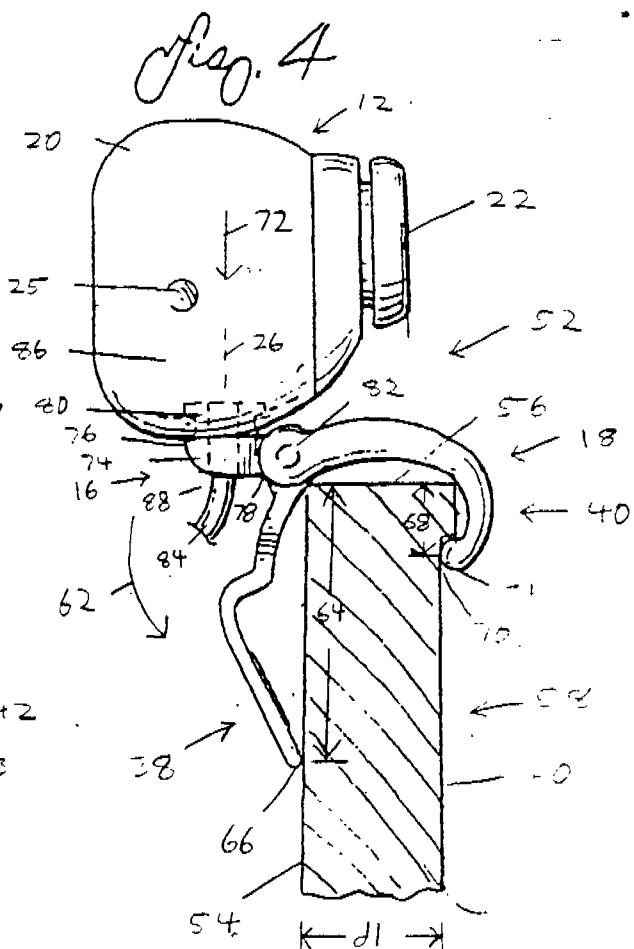
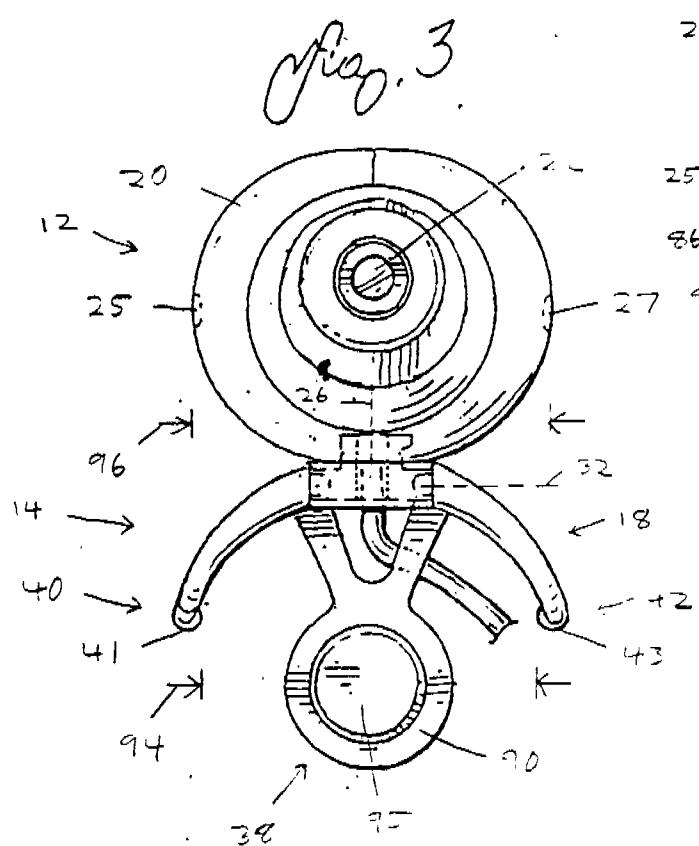
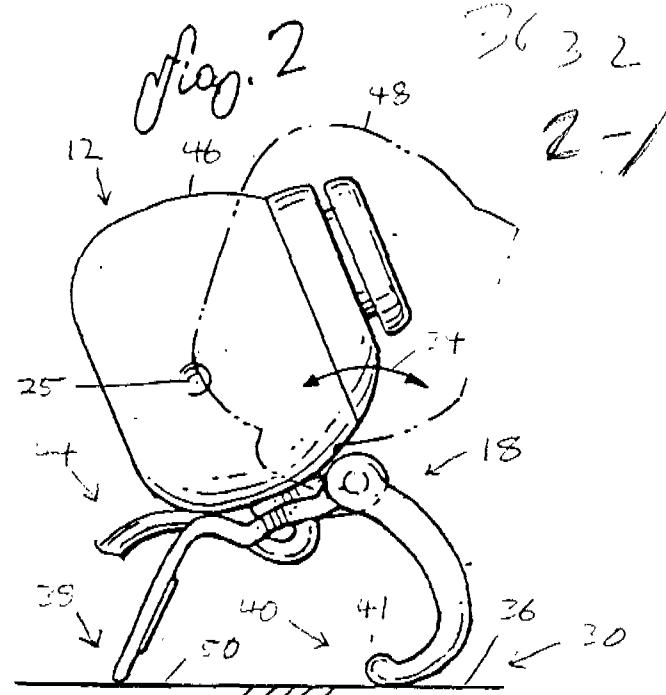
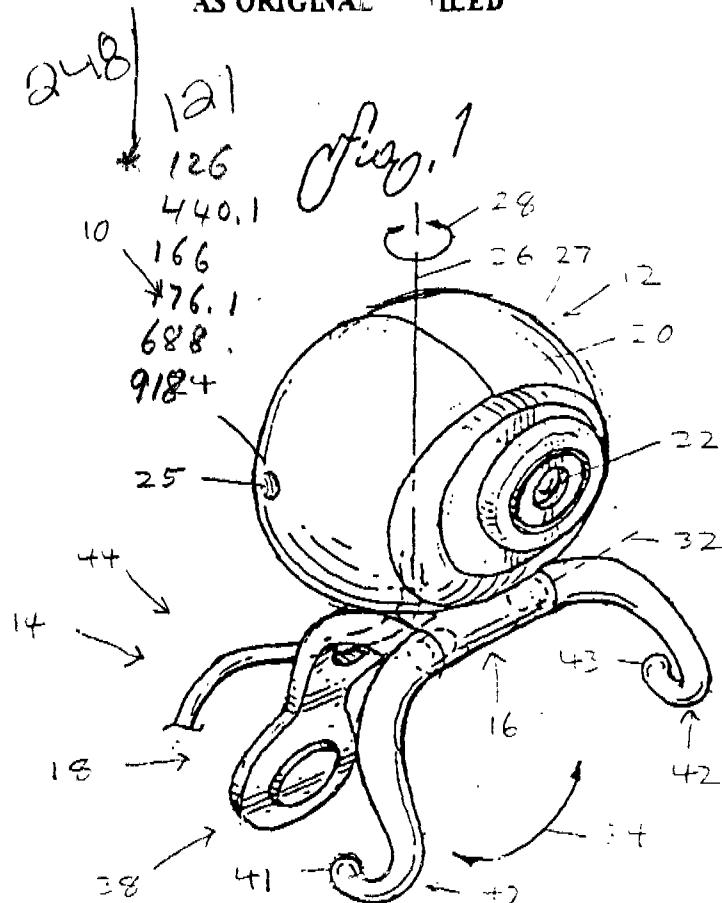
NAME OF PERSON SIGNING David E. Krekelberg

TITLE OF PERSON OTHER THAN OWNER CEO and CTO

ADDRESS OF PERSON SIGNING 15604 Dawn Drive, Minnetonka, Minnesota 55345

SIGNATURE _____ DATE _____

08/814168



224 | 908

396 | 421-428
428
425

2-1

08/814168

Fig. 5

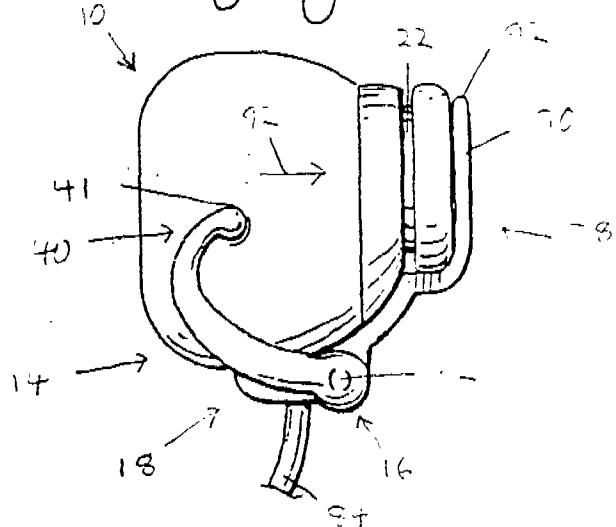


Fig. 6

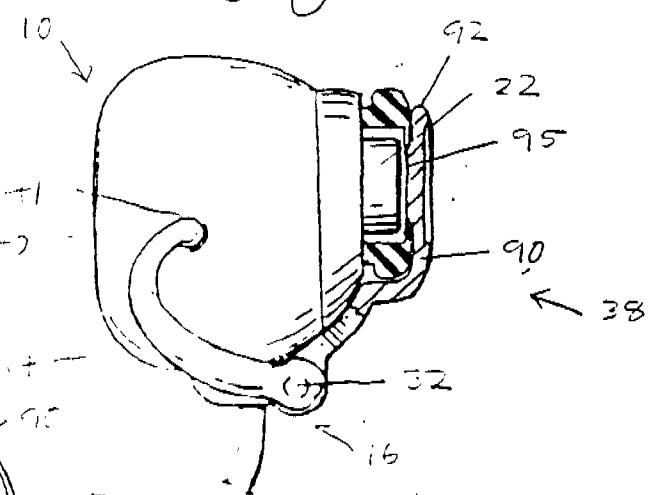
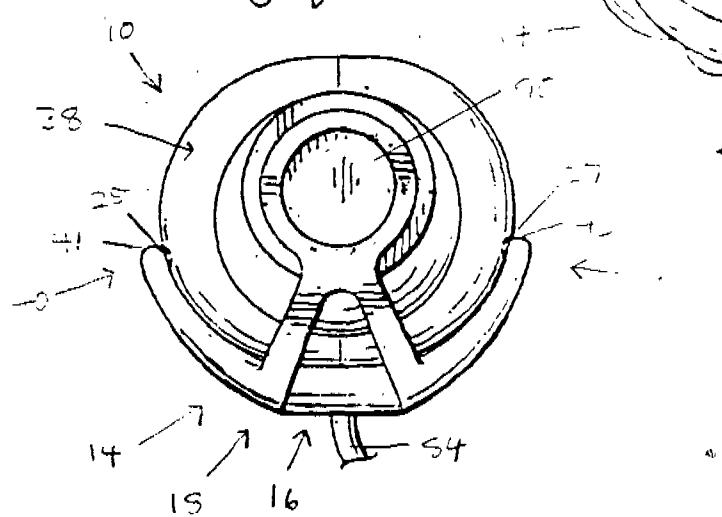


Fig. 7



TOTAL P.03

08/814168

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

David E. Krekelberg

67137 U.S. PTO

Serial No.: N/A


03/07/97

Filing Date: Herewith

For: CAMERA CLIP

Docket No.: 19239/103/101

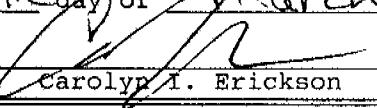
TRANSMITTAL SHEET

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

CERTIFICATE UNDER 37 C.F.R. 1.10: The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, "Express Mail Post Office to Addressee" having an Express Mail mailing label number of : EM 609 179 413 US, in an envelope address to: Assistant Commissioner for Patents Washington, D.C., 20231 on this 7th day of March, 1997

By _____


Carolyn I. Erickson

We are transmitting herewith the attached Patent Application including the following:

- [XXXX] 15 sheet(s) of specification.
- [XXXX] 11 sheet(s) of claim(s).
- [XXXX] 1 sheet(s) of Abstract.
- [XXXX] 2 sheet(s) of drawings.
- [XXXX] Unexecuted Declaration and Power of Attorney.
- [XXXX] An unexecuted verified statement(s) to establish small entity status under 37 C.F.R. 1.9 and/or 1.27 is enclosed.
- [] An Assignment of the invention to iREZ Research, Corporation is being filed contemporaneous with this patent application.
- [] A certified copy of a _____ application, serial no. _____, filed _____, 19_____, the right of priority of which is claimed under 35 U.S.C. 119.

CLAIMS AS FILED						
	(1)	(2)	SMALL ENTITY		OTHER	
FOR:	# FILED	# EXTRA	Rate	Fee	Rate	Fee
BASIC FEE				\$385		\$770
TOTAL CLAIMS	26-20 =	6	x11=	\$ 66	x22=	\$
INDEPENDENT CLAIMS	2 - 3 =	0	x40=	\$ 0	x80=	\$
() MULTIPLE DEPENDENT CLAIM PRESENTED			+130=	\$ 0	+260=	\$
TOTAL			\$451.00		\$	

*If the difference in Column (1) is less than zero, enter "0" in Column 2.

- [] Other _____
- [] Checks in the amounts of \$_____ and \$_____ are enclosed.
- [] Please charge any deficiencies or credit any overpayment in the enclosed fees to Deposit Account 14-0620.

By: Lawrence M. Nawrocki
 Lawrence M. Nawrocki
 Reg. No. 29,333

NAWROCKI, ROONEY & SIVERTSON, P.A.
Suite 401, Broadway Place East
 3433 Broadway Street N.E.
Minneapolis, Minnesota 55413
 Telephone: (612) 331-1464
 Facsimile: (612) 331-2239



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO./TITLE
08/814,168	05/07/07		H-2

NAIRACKI, RONALY STEPHEN
BROADWAY PLACE EAST SUITE 400
2430 BROADWAY STREET E. 11
MINNEAPOLIS MN 55413

DATE MAILED:

NOTICE TO FILE MISSING PARTS OF APPLICATION
Filing Date Granted

An Application Number and Filing Date have been assigned to this application. However, the items indicated below are missing. The required items and fees identified below must be timely submitted ALONG WITH THE PAYMENT OF A SURCHARGE for items 1 and 3-6 only of \$ 131.00 for large entity small entity in compliance with 37 CFR 1.27. The surcharge is set forth in 37 CFR 1.16(e). Applicant is given TWO MONTHS FROM THE DATE OF THIS NOTICE within which to file all required items and pay any fees required above to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

If all required items on this form are filed within the period set above, the total amount owed by applicant as a
 large entity **small entity (verified statement filed)**, is \$ 131.00.

1. The statutory basic filing fee is:

- missing.
 insufficient.

Applicant must submit \$ 110.00 to complete the basic filing fee and/or file a verified small entity statement claiming such status (37 CFR 1.27).

2. Additional claim fees of \$ 132.00, including any multiple dependent claim fees, are required.
Applicant must either submit the additional claim fees or cancel additional claims for which fees are due.

3. The oath or declaration:

- is missing.
 does not cover the newly submitted items.
 does not identify the application to which it applies.
 does not include the city and state or foreign country of applicant's residence.

An oath or declaration in compliance with 37 CFR 1.63, including residence information and identifying the application by the above Application Number and Filing Date is required.

4. The signature(s) to the oath or declaration is/are:

- missing.
 by a person other than inventor or person qualified under 37 CFR 1.42, 1.43, or 1.47.

A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.

5. The signature of the following joint inventor(s) is missing from the oath or declaration:

An oath or declaration listing the names of all inventors and signed by the omitted inventor(s), identifying this application by the above Application Number and Filing Date, is required.

6. A \$ _____ processing fee is required since your check was returned without payment (37 CFR 1.21(m)).

7. Your filing receipt was mailed in error because your check was returned without payment.

8. The application does not comply with the Sequence Rules.

See attached "Notice to Comply with Sequence Rules 37 CFR 1.821-1.825."

9. OTHER:

Direct the response and any questions about this notice to "Attention: Box Missing Parts."

A copy of this notice MUST be returned with the response.

M.R.Green
Customer Service Center
Initial Patent Examination Division (703) 308-1202



P A T E N T

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

David E. Krekelberg

Serial No.: 08/814,168

Filed: March 7, 1997

For: CAMERA CLIP

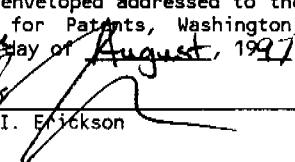
Docket No.: 19239/103/101

COMMUNICATION

Assistant Commissioner
for Patents
Washington, D.C. 20231

CERTIFICATE UNDER 37 C.F.R. 1.8
I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on this 27th day of August, 1997.

By: _____

Carolyn I. Erickson

Sir:

Applicant filed the application covered by the caption indicated above on March 7, 1997. The signature of the inventor was, however, missing on the DECLARATION. In response to the filing, the United States Patent and Trademark Office issued a NOTICE TO FILE MISSING PARTS OF APPLICATION - FILING DATE GRANTED document (FORM PTO-1533). That paper documented the fact that the filing date was granted for the application. Further, however, it documented a requirement that a properly signed Declaration in compliance with 37 CFR §1.63, identifying the application by

Application Number and Filing Date, be submitted. That paper also required that a surcharge in the amount of \$130, for a large entity, or \$65, for a small entity, be submitted. It documented a requirement that the statutory basic filing fee be paid, and that large entity filing fees in the amount of \$770 be submitted. Also, it documented that additional claim fees in the amount of \$132.00 for a large entity, including any required multiple dependent claim fees be submitted.

In view of the filing of small entity affidavit contemporaneous with this document, and the other documents filed with this package, the surcharge is in the amount of \$65.00, the filing fees are in the amount of \$385.00, and the additional claim fees are in the amount of \$66.00, for a total amount of \$516.00.

The period for response was set to expire two months from the date of that paper. The unextended deadline for responding is, therefore, August 25, 1997.

Please find enclosed the "RESPONSE" copy of the NOTICE TO FILE MISSING PARTS OF APPLICATION - FILING DATE GRANTED document, a Declaration signed by the named inventor, one (1) VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS, and a check in the amount of \$516.00 (the amount of the surcharge for a small entity, the small entity filing fees, and additional claim fees for a small business entity).

In view of the action taken herein, Applicant would submit that the requirements imposed by the NOTICE TO FILE MISSING PARTS OF APPLICATION - FILING DATE GRANTED paper have been complied with.

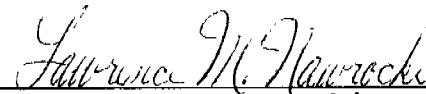
It is, therefore, requested that the application be passed for issuance of the formal FILING RECEIPT document.

Respectfully submitted,

David E. Krekelberg

By his attorney,

Dated: August 25, 1997



Lawrence M. Nawrocki, Reg. No. 29,333
NAWROCKI, ROONEY & SIVERTSON, P.A.
Suite 401, Broadway Place East
3433 Broadway Street Northeast
Minneapolis, MN 55413
Telephone: (612) 331-1464
Facsimile: (612) 331-2239



H3 COMBINED DECLARATION/POWER OF ATTORNEY FOR PATENT APPLICATION

a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled CAMERA CLIP, the specification of which (check one)

is attached hereto

was filed on March 7, 1997
as U.S. Application
Serial No. 08/814,168

and was amended on (if applicable) _____

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefit(s) under Title 35, United States Code §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application(s) for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)	Priority Claimed
------------------------------	------------------

(Number)	(Country)	(Day/Month/Year Filed)	YES	NO
(Number)	(Country)	(Day/Month/Year Filed)	YES	NO
(Number)	(Country)	(Day/Month/Year Filed)	YES	NO

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which

occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
--------------	---------------	---

(Serial No.)	(Filing Date)	(Status-patented, pending, abandoned)
--------------	---------------	---------------------------------------

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

John L. Rooney, Reg. No. 28,898;
 Lawrence M. Nawrocki, Reg. No. 29,333;
 Wayne A. Sivertson, Reg. No. 25,645;
 David M. Crompton, Reg. No. 36,772;
 Glenn M. Seager, Reg. No. 36,926;
 Steven E. Dicke, Reg. No. 38,431;
 Brian N. Tufte, Reg. No. 38,638;
 Craig F. Taylor, Reg. No. 40,199;
 Donald A. Jacobson, Reg. No. 22,308; and
 Lew Schwartz, Reg. No. 22,067

Send correspondence to:

Lawrence M. Nawrocki
 NAWROCKI, ROONEY & SIVERTSON, P.A.
 Suite 401, Broadway Place East
 3433 Broadway Street Northeast
 Minneapolis, Minnesota 55413
 (612) 331-1464

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon, I further declare that I understand the content of this declaration.

Full name of sole or first inventor David E. Krekelberg
 Inventor's Signature David E. Krekelberg Date 8/19/97
 Residence 15604 Dawn Drive, Minnetonka, Minnesota 55345 Citizenship U.S.A.
 Post Office Address 15604 Dawn Drive
Minnetonka, Minnesota 55345

-3-

1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

- (i) Opposing an argument of unpatentability relied on by the Office, or
- (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application;

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.



Applicant or Patentee: David E. Krekelberg Attorney's Docket No.: 19139/103/101
 Serial or Patent No.: 08/814,168
 Filed or Issued: March 7, 1997
 For: CAMERA CLIP

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY
STATUS (37 CFR 1.9(f) AND 1.27(c)) -- SMALL BUSINESS CONCERN**

I hereby declare that I am

- the owner of the small business concern identified below:
 an official of the small business concern empowered to act
 on behalf of the concern identified below:

NAME OF CONCERN iREZ Research, Corporation

ADDRESS OF CONCERN 15604 Dawn Drive, Minnetonka, Minnesota 55345

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled CAMERA CLIP by inventor(s) David E. Krekelberg described in

- the specification filed herewith
 application serial no. _____, filed _____
 patent no. _____, issued _____

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(b) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME _____

ADDRESS _____

INDIVIDUAL SMALL BUSINESS CONCERN NONPROFIT ORGANIZATION

NAME _____

ADDRESS _____

INDIVIDUAL SMALL BUSINESS CONCERN NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue

fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate.
(37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING Michael D. Harris

TITLE OF PERSON OTHER THAN OWNER President

ADDRESS OF PERSON SIGNING 15604 Dawn Drive, Minnetonka, Minnesota 55345

SIGNATURE M. D. Harris DATE 8-13-97



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
 Washington, D.C. 20231

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO./TITLE
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08/014,168

03/07/97

MANROCKI RODNEY STIVER LEON
 BROADWAY PLACE EAST
 3400 BROADWAY STREET N.E.
 MINNEAPOLIS MN 55413

DATE MAILED:

NOTICE TO FILE MISSING PARTS OF APPLICATION
Filing Date Granted

An Application Number and Filing Date have been assigned to this application. However, the items indicated below are missing. The required items and fees identified below must be timely submitted ALONG WITH THE PAYMENT OF A SURCHARGE for items 1 and 3-6 only of \$ 130.00 for a large entity small entity in compliance with 37 CFR 1.27. The surcharge is set forth in 37 CFR 1.16(e). Applicant is given TWO MONTHS FROM THE DATE OF THIS NOTICE within which to file all required items and pay any fees required above to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

If all required items on this form are filed within the period set above, the total amount owed by applicant as a
 large entity small entity (verified statement filed), is \$ 130.00.

1. The statutory basic filing fee is:

- missing.
 insufficient.

Applicant must submit \$ 110.00 to complete the basic filing fee and/or file a verified small entity statement claiming such status (37 CFR 1.27).

2. Additional claim fees of \$ 132.00, including any multiple dependent claim fees, are required.
Applicant must either submit the additional claim fees or cancel additional claims for which fees are due.

3. The oath or declaration:

- is missing.
 does not cover the newly submitted items.
 does not identify the application to which it applies.
 does not include the city and state or foreign country of applicant's residence.

An oath or declaration in compliance with 37 CFR 1.63, including residence information and identifying the application by the above Application Number and Filing Date is required.

4. The signature(s) to the oath or declaration is/are:

- missing.
 by a person other than inventor or person qualified under 37 CFR 1.42, 1.43, or 1.47.

A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.

5. The signature of the following joint inventor(s) is missing from the oath or declaration:

An oath or declaration listing the names of all inventors and signed by the omitted inventor(s), identifying this application by the above Application Number and Filing Date, is required.

6. A \$ 10.00 processing fee is required since your check was returned without payment (37 CFR 1.27(m)).

7. Your filing receipt was mailed in error because your check was returned without payment.

8. The application does not comply with the Sequence Rules.

See attached "Notice to Comply with Sequence Rules 37 CFR 1.821-1.825."

9. OTHER:

Direct the response and any questions about this notice to "Attention: Box Missing Parts."

A copy of this notice MUST be returned with the response.

M.R. Green
 Customer Service Center
 Initial Patent Examination Division (703) 308-1202

09/19/1997 DBEACH
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 385.00
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